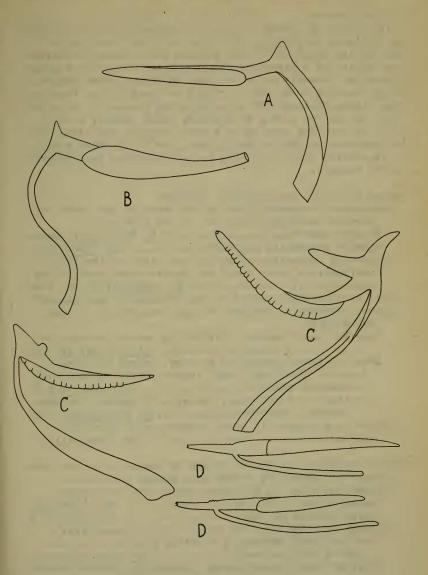
- (8) Journal of Botany, founded 1863, now in its eightieth volume.
- (9) George Bentham (1800--1884).
- (10) Encyclopédie méthodique. Botanique par M. le Chevalier de Lamarck. Paris, 1783--1817.
- (11) Alphonse Louis Pierre Pyramus de Candolle (1806--1893).
- (12) Jean Baptiste Antoine Pierre Monnet de Lamarck (1744-- 1829).

NEW OR NOTEWORTHY MELASTOMES, CHIEFLY ECUADOREAN

H. A. Gleason

There is in South America a group of seven species within the genus Meriania which have a conspicuous habital similarity. This is due, on superficial examination, to their broad 5-nerved leaves, usually elliptical in shape, their inflorescence with well developed central axis, and the densely pubescent, cinereous or ferruginous hypanthium. Closer examination reveals other features of similarity of a more technical nature. The hairs of the hypanthium are wholly or partly enlarged at base and there roughened or stellate, while the terminal portion is slender, smooth, and curved-ascending. The hairs of the lower leaf-surface are conspicuously or minutely stellate at base, with an erect simple bristle.

In the four species which inhabit Venezuela and Colombia we find also a strong similarity in the stamens (Fig. 1). The anthers are flattened tangentially; the thecae are scarcely in contact, so that the connective is visible from the anterior side. On the posterior side the connective is not elevated; it is prolonged straight back. The Peruvian species has a connective which appears quite different, but which can be readily homologized with the more northern species. In the Bolivian species we find a real divergence. Here the connective is prolonged into a large basal spur and a smaller dorsal spur. This plant, M. boliviensis Cogn., was originally assigned by its author to the section Eumeriania, characterized by unappendaged anthers and solitary flowers. Later, in his monograph of the family, he placed it in section Umbellatae, with paniculate flowers but with unappendaged anthers. Apparently Cogniaux never made a dissection



A. Meriania cuneifolia, isomorphic
B. M. colombiana, isomorphic
C. M. boliviensis, dimorphic
D. M. cuintuplinervis, dimorphic

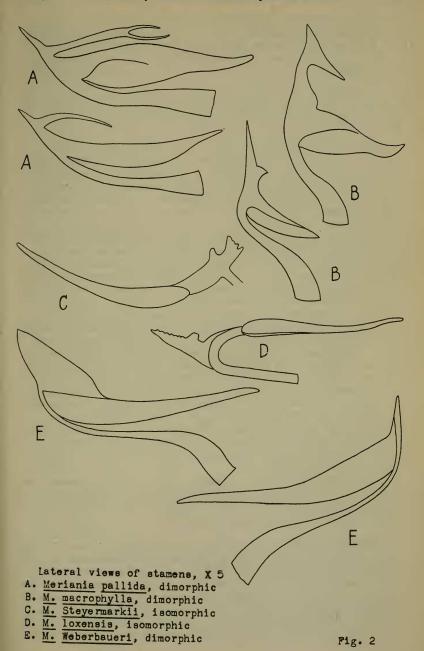
Fig. 1

of the flowers.

It is not my present purpose to attempt to decide whether the division of Meriania into five sections is valid, or whether the structure of the anthers should take precedence over habit and pubescence in determining intrageneric relationships. I merely point out that there are seven species which resemble each other strongly in these latter features. Since these features are so patent, the group will be recognized by any one trying to identify these species or any still undescribed species of similar nature. The seven may be separated by the following keys, the first based wholly on vegetative characters, the second utilizing the structure of the stamens.

Leaves 5-nerved, conspicuously dentate. Pubescence cinereous, that of the veins on the lower leafsurface no longer than that of the surface. Pubescence ferruginous, that of the veins on the lower leaf-surface much longer and coarser than that of the Leaves 5-pli-nerved, entire or very obscurely denticulate. Leaves subscute to rounded at base, broadest at or near the middle. Exterior teeth scarcely projecting beyond the sepals.... Exterior teeth projecting 2--3 mm. beyond the sepals. Pedicels 15--20 mm. long; leaves softly subtomentose Pedicels 5--8 mm. long; leaves very sparsely pubescent beneath, short-acuminate M. boliviensis Cogn. Leaves long-cuneate at base, broadest much above the

Leaves 5-nerved, conspicuously dentate; connective not lobed.



The mention of \underline{M} . Steyermarkii at this place is under no circumstances to be construed as publication, which will be effected elsewhere; no Latin diagnosis is here provided.

MERIANIA CUNEIFOLIA sp. nov. Sect. Umbellatae. Caules, petioli, folia subtus, paniculae, et hypanthia dense pubescentes, pilis basi incrassatis barbellatis, apice simplicibus. Dentes exteriores calycis ultra sepala producti. Stamina satis dimorpha; antherae complanatae; connectivum infra thecas rectum, dorse minute calcaratum, basi ima ad filamentum affixum.

Shrub 1.5 m. tall. Fanicle, hypanthia, stems, and lower leaf-surface softly cinereous, the hairs slender, smooth, and curved-ascending above an enlarged, roughened or stellate base. Petiole 2--3 cm. long. Blades oblanceolate, up to 15 cm. long and 4 cm. wide, abruptly and sharply acuminate, entire, long-cuneate at base. Panicle terminal, the 5-merous flowers in subumbellate terminal clusters on pedicels 4--8 mm. long. Hypanthium campanulate, 5.2 mm. long to the torus. Calyx irregularly ruptured to the torus, the lobes 8.5 mm. long, pubescent like the hypanthium, slightly thickened slong the median line but with no developed exterior teeth. Petals "buff-salmon", rotund, 13 mm. long. Stamens dimorphic; filaments 6.4 or 8.5 mm. long, flat, becoming concave at the summit; thecae 8.3 or 5.3 mm. long, etrongly flattened tangentially; connective prolonged straight back 2.5 mm., channeled on the lower side, affixed to the filament at its very base, bearing a large or very small, broadly conic, obtuse or rounded basal doreal spur. Style straight, 21 mm. long; stigma truncate.

Frov. Santiago-Zamora, Ecuador, dense forest between Campanas and Arenillas, altitude 2195 meters, Steyermark 53543. The species is further contrasted with its apparent relatives in the preceding paragraphs.

MERIANIA LOXENSIS sp. nov. Sect. Umbellatae. Caules, petioli, folia ad nervos subtus, et hypanthia dense sed tenuiter pubescentes, pilis basi incrassatis barbellatis, apice simplicibus. Dentes exteriores calycis ultra sepala bene producta. Stamina isomorpha; antherae complanatae; connectivum infra thecam in calcar dorsalem tuberculatum elevatum.

Shrub 3 m. tall. Stems, veins of the lower leaf-surface, petioles, and hypanthia thinly cinereous, the hairs slender,

smooth, and curved-ascending above an enlarged roughened or minutely stellate base. Petioles 10--15 mm. long. Blades firm, elliptic, up to 10 cm. long and 5 cm. wide, acute, denticulate in the distal half, rounded at base, very obscurely 5-pli-nerved, densely stellate-furfuraceous on the veins beneath, on the surface very minutely and sparsely stellate, a few of the hairs ending in a very short erect bristle. Flowers 5-merous, apparently solitary, on a pedicel 8 mm. long. Hypanthium campanulate, 8 mm. long to the torus, very thick-walled. Calyx-tube prolonged 1--1.5 mm.; sepals broadly ovate, thin, 3.5 mm. long, acute; exterior teeth adnate nearly to the summit of the sepals, projecting 3.5--5 mm. Petals "deep salmon-vermillion", obovate, 27 mm. long. Stamens isomorphic; filaments strongly flattened; anthers subulate, tangentially flattened, 9.4 mm. long; connective prolonged down the back as a sharp narrow ridge, greatly dilated immediately below the thecae, and below the summit of the filament prolonged 3.3 mm. into a flattened or subconic obtuse organ strongly tuberculate toward the tip. Ovary superior, 10-costate; stigma truncate.

Frov. Loja, Ecuador, Sotobosque, between Tambo Cachiyacu, La Entrada, and Nudo de Sabanillas, Steyermark 54468.

MERIANIA PALLIDA sp. nov. Sect. Fachymeriae. Arbor 20 m. alta, ramis juvenilibus 4-angulatis pallide furfuraceopuberulis. Fetioli usque ad 6 cm. longi, scuto dorsali ornati. Laminae firmae, ellipticae, usque 29 cm. longae 14 cm. latae, obtusae, integrae, basi rotundatae, 3-nerviae, jugo conspicuo marginali neglecto, supra glabrae opacae, subtus griseae arcte stellato-tomentosulae; venae secondariae supra planae, subtus elevatae, 5--8 mm. dissitae, sub angulo 800 divergentes. Panicula ca. 1 dm. longa; rachis compressa pulverulenta; pedicelli 5-8 mm. longi. Hypanthium late poculiforme, ad torum 5 mm. longum, primum sparse griseo-stellulatum, mox glabrescens. Calycis tubus 1.5 mm. longus, truncatus; dentes exteriores minuti, ca. O.1 mm. longi. Petala rosea, ca. 15 mm. longa, inequilatera, late oblonga. Filamenta glabra torta, basi lata, ad apicem angustata, 7 vel 7.5 mm. longa. Antherae subulatae, 9 vel 8 mm. longae, poro dorsoterminali dehiscentes. Connectivum ad dorsum antherae basin versus gradatim incrassatum, infra antheram in calcar assurgentem 4 vel 3.4 mm. longum productum; appendix dorsalis in ser. ext. ad basin connectivi, subulata, 6 mm. longa, apice bifurcata; in ser. int. ultra medium connectivi, subulata, 3.5 mm. longa.

Type, Cuatrecasas 15567, from Dept. del Valle, Colombia, Cordillera Occidental, vertiente occidental, Hoya del río Sanjuniquin, lado izquierdo, La Laguna, bosques, 1250--1400 m. alt., described as "Arbol 20 m., 30 cm. diám.; hoja cori-

ácea, gruesa, frágil verde esmeralda en el haz, pálida; cenicientto blanquecina en el enves; pétalos cárdeno vivo muy brillantes; cáliz verde o purpúreo; corteza grisáceo amarillenta pálida; madero amarilla."

The plant was originally identified by me as M. macro-phylla (Benth.) Triana. While certainly closely related to that species, it differs in such important respects that its recognition as a species is necessary (see Fig 2, p. 297). In M. macrophylla the two spurs of the connective are of approximately the same size, the leaves are shorter and more ovate, ferruginous rather than cinereous; in M. pallida the two spurs are very unequal, and the subulate anterior spur is bifurcate in the larger stamens, the leaves are elongate and elliptic and distinctly cinereous.

CALYPTRELLA DENTICULATA sp. nov. Folia elliptica vel obovato-elliptica, utrinque acuminata, 5-nervia. Flores longe pedicellata, 5-meri. Calyx ante anthesin apice 5-dentatus, ad anthesin non circumscissus, irregulariter ruptus in lobos 5--5 triangulares. Antherae 5.5 mm. longae. Stylus 17 mm. longus.



Fig. 3 Calyptrella denticulata, stamens X 6

Shrub up to 4.5 m. tall, the young stems, petioles, panicle, hypanthium, and lower leaf-surface stellate with minute hairs about O.1 mm. across. Leaves elliptic or obovateelliptic, up to 19 cm. long and 8 cm. wide, abruptly shortacuminate, entire, tapering to the base, 5-nerved or weakly 5-pli-nerved with an additional pair of marginal veins, glabrous above, soon glabrescent beneath except for a little persistent stellate pubescence along the nerves. Panicle terminal, 3--6 cm. long, many-flowered, its branches tending to nod. Hypanthium cup-shaped, about 4 mm. long to the torus, firm-walled, thinly stellate. Sepals in bud closely connate to the summit, where the minute exterior teeth project slightly, at anthesis irregularly ruptured into 3--5 broadly triangular lobes with convex side, the tube about 1 mm. long, the lobes about 2 mm. long. Petals obliquely subrotund, 9 mm. long, 10 mm. wide. Filaments flattened, 5.6 mm. long, opening by a minute pore; connective extending along

the thecae as a slender sharp ridge, below the thecae greatly thickened and prolonged 1.5 mm., bearing a thick dorsobasal spur. Ovary nearly free, 5-celled; style slender, 17

mm. long; stigma punctiform.

Prov. El Oro, Ecuador, forested slopes between Pampa de los Cedros, northeast of San Pablo, and Curtincapa, altitude 2285--2430 meters, Steyermark 53809; his number 54167, also from Prov. El Oro, is the same. Number 52781, collected a short distance to the north in Frov. Azuay, shows no point of difference in the flower, but the leaves are conspicuously 5-pli-nerved, the inner pair of veins arising about 15 mm. above the base of the leaf.

This is the eighth species of Calyptrella to be described. (An unpublished name under this genus is attached to H. H. Smith 3, found in many herbaria; the plant does not belong to this genus or even to this tribe of the family.) The eight may be distinguished by the following key.

Fetals ovate to lanceolate, acute or acuminate.

Flowers 6-merous; panicles 1--3 dm. long.

Fedicels 2--6 mm. long; Ecuador to Bolivia..... Fedicels obsolete, or less than 1 mm. long.

Leaves about half as wide as long; Mexico

C. Galeottii Naud.

Leaves about three-fourths as wide as long, or wider; Costa Rica, Colombia.....C. cycliophylla Donn. Sm. Flowers 4-merous.

Panicle 2 dm. long; leaves rounded at base, 7-nerved, stellate-puberulent beneath; Peru.... C. robusta Cogn. Panicle 5--10 cm. long; leaves acute or obtuse at base,

3-nerved (excluding the marginals).

Teaves coriaceous, minutely lepidote beneath; Feru.... Leaves thin, glabrous beneath; Feru......

Petals obovate to subrotund.

Flowers 4-merous; petals 4 mm. long; leaves 3-nerved, Flowers 5-merous; petals 9 mm. long; leaves 5-nerved, narrowed to the base; Ecuador......................... denticulata Gl.

MICONIA ZAMORENSIS sp. nov. Sect. Amblyarrhena. Panicula cum hypanthio longe glanduloso-hirsuta. Sepala patula, obovata, dentibus exterioribus subulatis. Petala late rotundato-obcordata. Ovarium setis ca. 10 glanduliferis coronatum; stylus tenuissime villosulus; stigma peltatum.

Stem, petioles, and branches of the panicle freely hirsute with slender spreading hairs 2--3 mm. long, those of

the panicle mostly gland-tipped, those of the petioles mostly simple, those of mature stems entirely simple. Petioles 1.5--3.5 cm. long. Blades thin, elliptic-oblong, up to 12.5 by 6.5 cm., acuminate, minutely serrulate, rounded or broad-

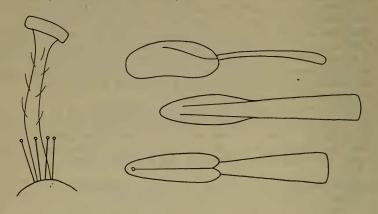


Fig. 4 Miconia zamorensis, style and stamens X 10

ly obtuse at base, 5-nerved or weakly 5-pli-nerved, hirsute with yellowish hairs 2--2.5 mm. long, those of the upper side avoiding the veins, those of the lower side on the veins only. Panicle about 1 dm. long, including the long peduncle, loosely branched and few-flowered; actual pedicels only 0.5 mm. long. Flowers 5-merous. Hypanthium broadly cupshaped, 2 mm. long to the torus. Sepals round-obovate, 1.6 mm. long from the sinuses, much exceeding the subulate exterior teeth. Fetals 2.7 mm. long, 3.3 mm. wide. Stamens isomorphic; filements flat, gradually tapering from a wide base, glabrous; anthers oblong, 4-celled, 2.4 mm. long, opening by a ventro-terminal pore; connective simple. Overy inferior, crowned by about 10 erect glandular setae; style (immature) 4 mm. long, obscurely villosulous; stigma peltate, not angled, 1.1 mm. in diameter.

"Shrub 5 feet tall; petals white; filaments white; anthers yellow; calyx greenish-white; pedicels and peduncle pale salmon; leaves membranous, shining and deep green above, pale green below." Prov. Santiago-Zamora: high wooded slopes above Valladolid, altitude 2100--2400 meters, Steyermark 54701. Among the 141 described species of this section, the great majority of which are represented in the herbarium of the New York Botanical Garden by authentic specimens, detailed drawings, or notes, not one has similarly glandular-hirsute pubescence. In foliage and especially in inflores-

cence, $\underline{\text{M. zamorensis}}$ resembles $\underline{\text{M. Killipii}}$ Gl. of Colombia, and $\underline{\text{M. megastigma}}$ Gl. of Ecuador. Both of these have glandular filaments and styles and anthers of entirely different shape.

MICONIA BARBIPILIS sp. nov. Sect. Amblyarrhena. Folia ovata, supra bullata asperrima, subtus, sicut caulis, rachis, et hypanthium, pilis conicis basi dense barbatis obtecta. Filamenta stylusque sparse glanduloso-puberula. Stigma late peltatum 5-angulatum.

A shrub 3 meters tall. Stem stoutly 4-engled, densely ferruginous with stoutly conic or nearly ovoid hairs barbellate at base, slender above. Fetioles similarly pubescent, 3--7 cm. long. Blades ovate, up to 25 cm. long and 15 cm. wide, subacuminate, broadly rounded at base, 7-nerved; upper surface bullate, the principal bullae terminated by a conic ascending heir about 0.5 mm. long; lower side foveolate, the veins all marked by a row of barbellate hairs like those of the stem but shorter. Fanicle 15 cm. long, sparsely branched, pubescent like the stem. Flowers 5-merous, sessile, subtended by ovate bracts 3.5--4 mm. long. Hypenthium cupshaped, thick-walled, about 3 mm. long to the torus, densely beset with ovoid ascending hairs about 0.5 mm. long and barbellate at the base. Calyx-tube prolonged about 0.8 mm.; sepals semicircular, thin, about 0.9 mm. long above the sinuses; exterior teeth continuous, pubescent like the hypanthium but more sparsely, terminating in a very short conic projection. Petals white, obliquely obovate, about 5 mm. long and nearly as wide. Stamens isomorphic; filaments broad and flat, sparsely and minutely glandular-puberulent; anthers oblong, 4-celled, 3.3 mm. long, opening by a minute ventroterminal pore; connective simple. Ovary inferior, apparently 5-celled; style columnar, at least 5 mm. long, densely glandular-puberulent; stigma peltate, 5-angled, 2.1 mm.wide.

"Shrub 10 feet tall; petals white; calyx dull olivegreen; leaves deeply and finely rugose both sides, dull buff-green below, dark green above; anthers yellow." Province Santiago-Zamora, trail between Failas and El Pan, alti-

tude 2255--3445 meters, Steyermark 54308.

In Cogniaux' monograph there is a group of twelve species described as "folia supra appendicis crassis conicis vel pyramidatis strigosa" or "folia supra bullis setiferis pustulata." Our plant is related to these species and to the four recently described members of the same group, M. frontinoana Gl., M. trichrona Macbr., M. Fennellii Gl., and M. pseudoradula Cogn. & Gl. Among these M. barbipilis is the only species with barbellste pubescence, as described above.

There is in the Andes of Ecuador and Colombia a small group of species in the section Amblyarrhena of the vast ge-

us Miconia which not only have the same general aspect, as seen mounted on herbarium sheets, but also agree in certain points of structure. They probably constitute a distinct species-group. At least four of them seem to be apparently low plants, almost herbaceous of stem, freely and diffusely branched. The other two are variously advertised as shrubs, low trees, or trees, usually with no statement of height, although one specimen is designated as a tree four feet tall. When dry, all species have a dull green or bluish green cast. The leaves are thin, ovate, and prominently reticulate on the lower surface. The petals are broadly obovate, slightly retuse, and nearly equilateral; the flat filaments are not geniculate and taper uniformly from a broad base to a narrow summit. The plump anthers tend to be slightly obovate; they are essentially isomorphic, but in the epipetalous series the connective narrows toward the base, while in the episepalous series it broadens and is obscurely bilobed; in all but one species it is prolonged briefly below the thecae into an inconspicuous dorsal lobe. The filaments and style are glabrous; the stigma is capitate. The six species may be separated by the following brief key.

Pubescence of the hypanthium and panicle stellate, either wholly or with simple hairs also...<u>M. psychrophila</u> Naud. Pubescence of the hypanthium and panicle entirely of unbranched hairs.

Pubescence entirely of long spreading unbranched hairs. Hairs partly or chiefly gland-tipped.

Hairs all simple.

M. scabriuscula Cogn., a Bolivian species which I have not seen, was stated by the author to be related to M. acalephoides. It is said to have bullate leaves and a long-set-ose calyx, as in that species, but 5-merous flowers. The exterior teeth were not mentioned by Cogniaux.

MICONIA INNATA sp. nov. Sect. Amblyarrhena. Frutex 6 dm. altus, cauli cum petiolo pubescente, pilis flexuosis usque

ad 1 mm. longis. Petioli 1--2 cm. longi. Laminae tenues, ovatae, opace virides subtus pallidiores, obtusae, irregulariter crenulatae, basi rotundatae vel subcordatae, 5-nerviae

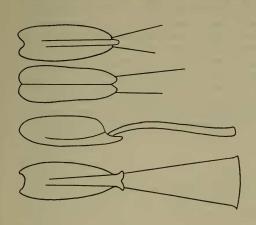


Fig. 5 Miconia innata, stamens X 18

vel fere 5-plinerviae, supra fere glabrae, subtus ad venas sicut cauli pubescentes. Panicula pyramidalis 5--6 cm. longa, minute pubescens, pilis incurvis 0.2 mm. longis. Flores 4-meri. Hypanthium tubulosum, ad torum 2 mm. longum, sicut panicula pubescens. Calycis tubus 0.2 mm. productus; sepala triangularia obtusa, a sinibus 0.7 mm. longa; dentes exteriores rotundata crassa, ca. 0.2--0.3 mm. in diametro.

Petala obovata alba, 2 mm. longa. Stamina fere isomorpha; filamenta complanata, 1.6 mm. longa; thecae oblongae obtusae 4-loculares, poro satis lata terminalis dehiscentes; connectivum minutissime productum in lobum dorsalem, in stam. serext. obscure bilobum, in ser. int. angustatum. Stigma capitatum.

Prov. Santiago-Zamora, Ecuador, between Pailas and El Pan, altitude 2255--2445 meters, Steyermark 54309.

MICONIA HIRSUTIVENA sp. nov. Sect. Cremanium. Caules, petioli, et basibus venarum majorum longe hirsuta. Flores 5-meri. Antherae isomorphae, obovato-oblongae, 2-loculares, connectivo basi producto in lobum unicum dorsalem late obovatum. Stylus clavatus; stigma truncatum. Folia elliptica acuminata 3-nervia glabra, venis exceptis.

Shrub 3 m. tall, the stems roughly hirsute with simple hairs about 3 mm. long. Petioles 6--10 mm. long, similarly hirsute. Blades thin, elliptic, up to 12 cm. long by 5 cm. wide, slenderly acuminate, entire, obtuse or subrotund at base, 3-nerved with an additional pair of marginal veins, glabrous on both sides except for the hirsute bases of the primary veins. Panicle about 1 dm. long, merely furfuraceous. Flowers 5-merous, all on pedicels 1--1.5 mm. long. Hypanthium cup-shaped, 1.8 mm. long to the torus, glabrous.

Calyx-tube nearly erect, 0.8 mm. long; sepals truncate-triangular, about 0.4 mm. long; exterior teeth merely totally adnate thickenings. Petals obovate, inequilateral, white, 1.9 mm. long. Stamens isomorphic; filaments flat, 3.3 mm. long, tapering from a broad base, geniculate at two-thirds of their length, glabrous; anthers oblong, 1.3 mm. long; connective greatly thickened below and prolonged about 0.3 mm. below the thecae, not lobed. Style gradually enlarged distally, glabrous, 3.5 mm. long; stigma truncate.

Frov. El Oro, Ecuador, between Paccha and Puente Grande, altitude 1830--2430 meters, Steyermark 54142. The species appears related to M. divergens Triana, in which the panicle and upper leaf-surface are pilose and the flowers smaller.

NOTES ON NEW AND NOTEWORTHY PLANTS. II

Harold N. Moldenke

AEGIPHILA FARINOSA Moldenke, sp. nov.

Arbor; ramulis crassis tetragonis cavis dense ochraceofarinosis; petiolis crassis dense ochraceo-farinosis; laminis late ellipticis vel subobovatis breviter acuminatis, ad basin attenuato-acutis vel breviter acuminatis, integris supra parce farinosis glabrescentibus, subtus farinosis; inflorescentiis axillaribus vel supra-axillaribus bifurcatis fulvo-farinosis; calyce truncato integro vel minutissime 4apiculato.

Tree to 8 m. tall; bark almost flat, gray-ochraceous, succulent, clear-ochre in section; wood pliant, white; branchlets apparently stout, tetragonal, hollow, ampliate and flattened at the nodes, densely ochraceous-farinose, slightly tuberculate-lenticellate; nodes not annulate; principal internodes 3--4 cm. long; leaves decussate-opposite; petioles stout, 3--4 cm. long, densely ochraceous-farinose; blades membranous-chartaceous, clear-green above when fresh, somewhat lighter beneath, broadly elliptic or very slightly obovate, 13.5--24 cm. long, 6--10 cm. wide, short-acuminate at apex, attenuate-acute or short-acuminate at base, entire, sparsely farinose above but glabrescent in age except for the densely farinose midrib, sparsely farinose beneath, more densely so on the midrib and larger veins; midrib stout, prominulous above, very prominent beneath; secondaries slender, 9 or 10 per side, arcuate-ascending, arcuately joined in many loops some distance from the margins, plane above, prominulous beneath; vein and veinlet reticulation conspicu-